

A3

SUMMARY OF THE INVENTION

Page 4, between lines 10 and 12, a new heading is added.

A4

BRIEF DESCRIPTION OF THE DRAWINGS

Page 4, between lines 24 and 25, a new heading is added.

A5

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Page 5, lines 14-18, delete current paragraph and insert therefor:

A6

Further mechanical and optical details of an example of such an apparatus are described in European Patent Application No. 00303749.6.

Page 7, lines 3-5, delete current paragraph and insert therefor:

A7

To centre the trigger signal in the time interval t_2 , t_2 is set at $t_1 + 1/2t$ which must be equal to 60ms, where t is the variation in t_1 or 3ms. Thus t_1 was actually set at 58.5ms.

IN THE CLAIMS:

Please replace claims 1-4, 9 and 10 as follows:

1. (Amended) A method of making measurements of an object using an optical measuring apparatus which includes a light source which generates a beam of light, and a detector, upon which is incident the beam of light, the method comprising the steps, in any suitable order, of:

causing a beam of light to be emitted from the light source;

generating a first detection signal within the detector when the beam of light from the light source is interrupted;

providing a first time interval when the first detection signal is generated;

providing a second time interval wherein the second time interval is shorter than the first time interval and commences at the end of the first time interval;

emitting an output signal from the detector if a further detection signal is present within the detector during the second time interval.

2. (Amended) A method of making measurements of an object as claimed in claim 1 further comprising the steps of:

rotating the object; and

wherein the first time interval is dependent on the speed of rotation of the object.

3. (Amended) A method of making measurements of an object as claimed in claim 2 wherein the object is a tool having a tool edge, and the first time interval is substantially the time for the edge of the tool to come around again following its interruption with the beam.

4. (Amended) A method according to claim 3 wherein the apparatus further includes a clock, the method comprising the further steps of:

rotating the tool;

causing the clock to initiate the emission of a series of pulses each of which are equal in duration to the second time interval and are synchronised with the speed of rotation of the tool, the first pulse being emitted to coincide with a detection signal being generated in the detector;

emitting an output signal from the detector only if a detection signal is also present within the detector during the existence of a clock pulse;

stopping the clock if no such detection signal is present in the detector.

9. (Amended) Optical apparatus for measuring objects comprising a light source for generating a beam of light and comprising a detector arranged to receive the said beam and for generating a signal when the beam is interrupted, wherein the detector in use:

generates a first detection signal within the detector when the beam of light from the light source, incident on the detector is interrupted;

provides a first time interval when the first detection signal is generated;